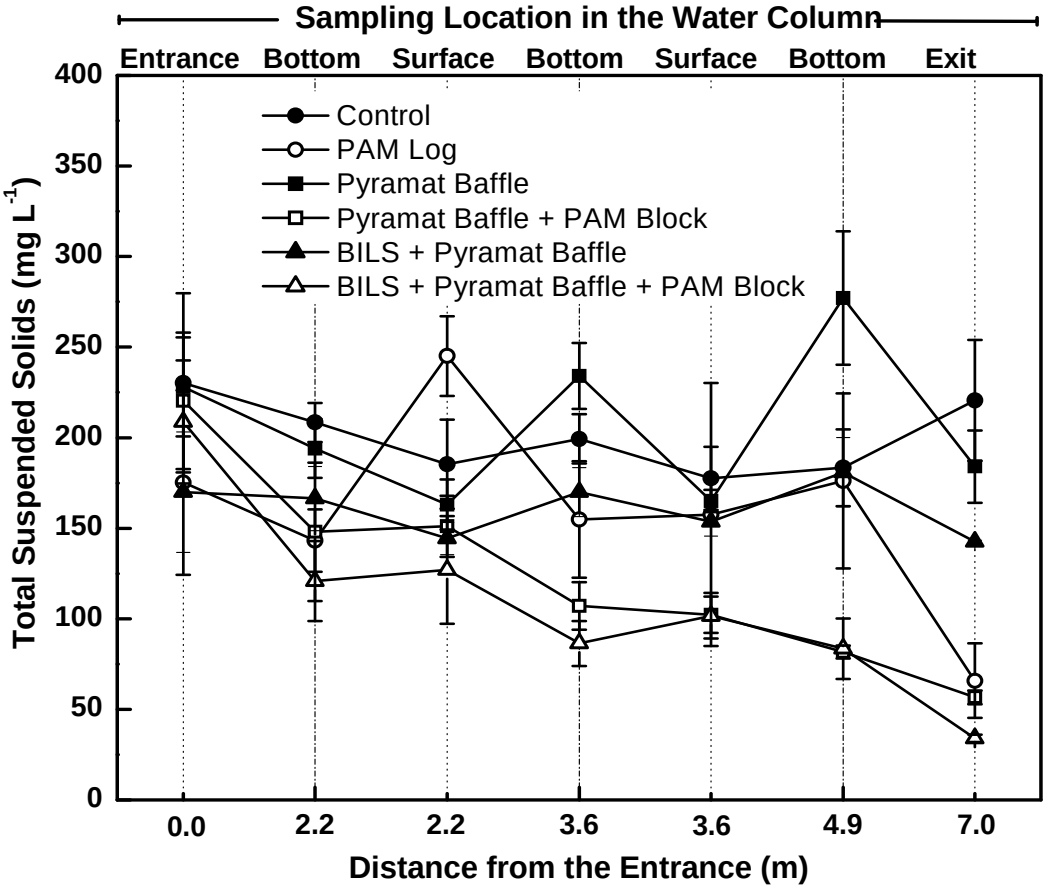

Figure 2-8. Treatment effects on TSS in the stilling basin with either no baffles or Pyramat baffles.

The physical treatments did significantly reduce TSS at the outlet compared to the 4% reduction in the open basin (table 3). As with turbidity, TSS was reduced much more by the PAM treatment than by the physical treatments, with 56-84% reduction at the outlet. The coir alone and BILS + Pyramat treatments significantly improved TSS reduction compared to the open basin. The BILS significantly reduced TSS capture in the coir baffle treatment with PAM, in contrast to the effect with no PAM. The BILS may improve TSS capture for the Pyramat baffle, but the effect was not significant in these tests.
The analysis of the overall treatment effects, measured as reductions in turbidity and TSS from inlet to outlet, suggests that the physical treatments were relatively ineffective compared to PAM. The open basin (control) reduced turbidity by only 7%, and adding the porous baffles only brought this up to 14 to 25% (table 3). However, dosing the water with PAM brought turbidity down by 78-88%, regardless of the physical layout of the basin, far exceeding the performance of any combination of physical system that were tested. Because the baffles improved turbidity and TSS reductions more in the untreated tests compared to the PAM treated tests, there was a significant interaction between baffles and PAM treatments (table 2-4). The addition of coir and Pyramat baffles reduced turbidity relative to the controls except in the Pyramat and BILS combination, which explains the significant interaction of BILS and PAM treatments. Among the PAM treatment